IN THE SPECIFICATION

On page 17, please replace the original Abstract with the following amended Abstract:

ABSTRACT

An integrated propulsion and guidance system for a vehicle includes an engine coupled to an impeller via a driveshaft to produce propulsive force. The impeller includes a hub and a plurality of blades, including at least one control blade pivotably mounted to the hub. A control system provides a control signal to a magnetic actuator to adjust the blade pitch of the control blades as the blades rotate about the hub. ~~The magnetic actuator provides an electromagnetic field that interacts with a magnet coupled to the control blade to adjust the pitch of the control blade.~~ The change in blade pitch produces a torque on the driveshaft that can be used to control the heading of the vehicle. ~~By varying the magnitude and phase of the control signal provided to the impeller, the torque can be applied in a multitude of distinct reference planes, thereby allowing the orientation of the vehicle to be adjusted through action of the impeller. Moreover, because the control blades are actuated magnetically, mechanical linkages between the impeller and the blade control motor may be eliminated.~~

Please replace original paragraph [0021] with the following amended paragraph:

[0021] Controller ~~108~~ 102 is any processor, processing system or other device capable of generating control signals 104, 106 to engine 108 and control motor 114, respectively. In various embodiments, controller ~~108~~ 102 is a microcontroller or microprocessor-based system with associated memory and/or mass storage for storing data and instructions executed by the processor. Although a single controller ~~108~~ 102 is shown in FIG. 1, alternate embodiments may use two or more separate processors for producing control signals 104 and 106.

Please replace original paragraph [0027] with the following amended paragraph:

[0027] In the example shown in FIG. 2, as impeller 110 rotates in the direction of arrows 206, the pitch of one or more control blades 202 is adjusted to create additional impedance ($I_b$) at the 90 degree position by rotating the blade in the direction of arrow ~~210b~~ 208. Similarly, the pitch of one or more control blades 202 is adjusted to create reduced impedance ($I_d$) at the 270 degree position. An increase in impedance may be created by, for example, pivoting blade 202b such that the broad face of the blade is more perpendicular to the direction of motion; decreases in impedance may be created by turning the broad face of blade 202d to be more parallel to the direction of movement. Because the impedance force is greater at the 90 degree position than at the 270 degree position of impeller 110, the imbalance of force between $I_b$ and $I_d$ produces a moment about hub 204 and/or driveshaft 112 (FIG. 1) that can be used to adjust the orientation of vehicle 100. The pitch of control blades 202b and 202d therefore changes as the blades rotate about hub 204.

Please replace original paragraph [0036] with the following amended paragraph:

[0036] Referring now to FIG. 7, an exemplary impeller 602 suitably includes any number of blades 604 (e.g. six blades arranged in three pairs are shown in FIG. 7) rotating about a central hub 706 that is coupled to receive rotational energy from a driveshaft 712. In the exemplary impeller 602 shown in FIG. 7, blades 702a-b are pivotable control blades and the other four blades (shown as blades ~~704~~ 604) are rigidly fixed with respect to hub 706. Fixed blades ~~704~~ 604 may be bolted, welded, integrally formed or otherwise rigidly fixed to hub 706 in any manner. Control blades 702a-b are appropriately joined to a moveable magnet assembly 704 that is linearly moveable within hub 706 to actuate (pivot) the control blades. The control blades themselves pivot upon bearings 708 mounted to hub 706.